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Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. 104959	APPLICATION NO. 09/736,151		
INFORMATION DISCLOSURE STATEMENT		APPLICANTS Ali LAAYOUN et al				
		FILING DATE December 17, 1999	GROUP 1637			
U.S. PATENT DOCUMENTS						
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
<i>S.T.</i>	A	5,171,853	12/1992	Thorp et al.	536	27
FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
<i>J. Hy</i>	B	EP 0 801 072 A	10/1997	Europe	C07H	21/02
	C	DE 198 15 864 A1	10/1999	Germany (& Abstract)	C07H	19/20
	D	WO 93/20241	10/1993	WIPO	C12Q	1/68
	E	WO 98/27229	06/1998	WIPO	"	"
<i>Joyce</i>	F	WO 99/65926	12/1999	WIPO (& Abstract)	C07H	21/00
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)						
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<i>Joyce</i>				<i>8/23/2002</i>		
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<i>J. Tung</i>		5,449,767	09/12/95	WARD et al.	536 24.3
		5,328,824	07/12/94	WARD et al.	435 6
		5,317,098	05/31/94	SHIZUYA et al.	536 23.1
		5,585,481	12/17/96	ARNOLD, JR. et al.	" 25.33
		4,683,195	07/28/87	MULLIS et al.	435 6
		4,683,202	07/28/87	MULLIS	" 91
<i>J. Tung</i>		4,800,159	01/24/89	MULLIS et al.	" 172.3
FOREIGN PATENT DOCUMENTS					
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS SUB CLASS
<i>J. Tung</i>		EP A 0 097 373	01/04/84	EUROPE	207H 21/00
		EP A 0 329 198	08/23/89	EUROPE	" 19/10
		EP A 0 302 175	02/08/89	EUROPE	" 21/00
		EP A 0 063 879	11/03/82	EUROPE	" 19/20
<i>J. Tung</i>		EP A 0 567 841 w/Abstract	11/03/93	EUROPE	" 19/04
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)					
<i>J. Tung</i>	CHEE, M. et al., "Accessing Genetic Information with High-Density DNA Arrays," Science, Vol. 274, pp. 610-614, 1996.				
	CAVIANI PEASE, A. et al., "Light-generated oligonucleotide arrays for rapid DNA sequence analysis," Proc. Natl. Acad. Sci. USA, Vol. 91, pp. 5022-5026, 1994.				
	SAMBROOK, J. et al., "Molecular Cloning, a Laboratory Manual," Cold Spring Harbor Laboratory Press, Second Edition, pp. 5.30-5.95, 1989.				
	LINDAHL, T. et al., "Rate of Chain Breakage at Apurinic Sites in Double-Stranded Deoxyribonucleic Acid," Biochemistry, Vol. 11, No. 19, pp. 3618-3623, 1972.				
	LIUZZI, M. et al., "Characterization of damage in γ -irradiated and OsO ₄ -treated DNA using methoxyamine," Int. J. Radiat. Biol., Vol. 54, No. 5, pp. 709-722, 1988.				
<i>J. Tung</i>	BRESLOW, R. et al., "Recognition and catalysis in nucleic acid chemistry," Proc. Natl. Acad. Sci. USA, Vol. 90, pp. 1201-1207, 1993.				
EXAMINER	<i>Joyce Tung</i>			DATE CONSIDERED <i>9/24/2002</i>	
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J. Tung		4,786,600	11/22/88	KRAMER et al.	435 235
		5,744,305	04/28/98	FODOR et al.	" 6
		5,445,934	08/29/95	FODOR et al.	" "
		5,554,516	09/10/96	KACIAN et al.	" 91,2
		5,422,252	06/06/95	WALKER et al.	" "
		4,868,105	09/19/89	URDEA et al.	" 6
J. Tung		5,124,246	06/23/92	URDEA et al.	" "
FOREIGN PATENT DOCUMENTS					
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS
J. Tung		EP A 0 320 308	06/14/89	EUROPE	C12Q 1/68
		EP A 0 286 898	10/19/88	EUROPE	C07H 21/02
		EP A 0 280 058	08/31/88	EUROPE	H04N 9/82
		EP A 0 709 468	05/01/96	EUROPE	C12Q 1/68
J. Tung		WO A 93/16094	08/19/93	WIPO	C07H 21/00
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)					
J. Tung	/	HOVINEN, J. et al., "Imidazole Tethered Oligodeoxyribonucleotides: Synthesis and RNA Cleaving Activity," J. Org. Chem., Vol. 60, pp. 2205-2209, 1995.			
		BLATTNER, F. et al., "The Complete Genome Sequence of <i>Escherichia coli</i> K-12," Science, Vol. 277, pp. 1453-1462, 1997.			
		ABRAVAYA, K. et al., "Strategies to Avoid Amplicon Contamination," Nucleic Acid Amplification Technologies, pp. 125-133, 1997.			
		CHEVALIER, J. et al., "Biotin and Digoxigenin as Labels for Light and Electron Microscopy in Situ Hybridization Probes: Where Do We Stand?" J. Histochem. Cytochem., Vol. 45, No. 4, pp. 481-491, 1997.			
		GREISEN, K. et al., "PCR Primers and Probes for the 16S rRNA Gene of Most Species of Pathogenic Bacteria, Including Bacteria Found in Cerebrospinal Fluid," J. Clinical Microbiol., Vol. 32, No. 2, pp. 335-351, 1994.			
J. Tung		TROESCH, A. et al., "Mycobacterium Species Identification and Rifampin Resistance Testing with High-Density DNA Probe Arrays," J. Clinical Microbiol., Vol. 37, No. 1, pp. 49-55, 1999.			
EXAMINER			DATE CONSIDERED J. Tung 9/24/2002		
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<i>J. Tung</i>		5,130,238	07/14/92	MALEK et al.	<i>435- 91</i>
		5,399,491	03/21/95	KACIAN et al.	<i>" 91,21</i>
		5,684,149	11/04/97	MORROW	<i>540 474</i>
		5,437,990	08/01/95	BURG et al.	<i>435 91,21</i>
		5,605,796	02/25/97	CHEN et al.	<i>" 6</i>
<i>J. Tung</i>		5,766,849	06/16/98	McDONOUGH et al.	<i>" 1</i>
FOREIGN PATENT DOCUMENTS					
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS SUB CLASS
<i>J. Tung</i>		WO A 88/04300	06/16/88	WIPO	<i>C07H 17/02</i>
		WO A 88/01302	02/25/88	WIPO	<i>C12Q 1/68.</i>
		WO A 88/10315	12/29/88	WIPO	<i>" "</i>
		WO A 93/22461	11/11/93	WIPO	<i>" "</i>
<i>J. Tung</i>		WO A 94/03472	02/17/94	WIPO	<i>C07H 21/04</i>
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)					
<i>J. Tung</i>		FURUTA, T. et al., "Direct Esterification of Phosphates with Various Halides and its Application to Synthesis of cAMP Alkyl Triesters," J. Chem. Soc. Perkin Trans., Vol. 1, pp. 3139-3142, 1993.			
<i>J. Tung</i>		SAMBROOK, J. et al., "Removal of Ethidium Bromide from DNAs Purified by Equilibrium Centrifugation in CsCl-Ethidium Bromide Gradients," Plasmid Vectors, 2nd Edition, p. 1.46, 1989.			
		AmpliScribe™ T7, T3, and SP6 High-Yield Transcription Kits Product Information, Epicentre Technologies, pp. 1-3, Date Unknown.			
<i>J. Tung</i>		ZUCKERMANN, R. et al., "Site-selective cleavage of structured RNA by a staphylococcal nuclease-DNA hybrid," Proc. Natl. Acad. Sci. USA, Vol. 86, pp. 1766-1770, 1989.			
		GISH, G. et al., "DNA and RNA Sequence Determination Based on Phosphorothioate Chemistry," Science, Vol. 240, pp. 1520-1522, 1988.			
<i>J. Tung</i>		NAKAMAYE, K.L. et al., "Direct sequencing of polymerase chain reaction amplified DNA fragments through the incorporation of deoxynucleoside α -thiotriphosphates," Nucleic Acids Res., Vol. 16, No. 21, pp. 9947-9959, 1988.			
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<u>J. Tung</u>		5,525,464	06/11/96	DRMANAC et al.	<u>435</u>	<u>6</u>
		5,202,231	04/13/93	DRMANAC et al.	"	<u>19</u>
		5,807,522	09/15/98	BROWN et al.	<u>422</u>	<u>50</u>
		5,700,637	12/23/97	SOUTHERN	<u>435</u>	<u>6</u>
		5,981,734	11/09/99	MIRZABEKOV et al.	<u>536</u>	<u>656</u>
		5,582,829	12/10/96	ALLIGER et al.	<u>424</u>	<u>234.1</u>
<u>J. Tung</u>		5,688,670	11/18/97	SZOSTAK et al.	<u>435</u>	<u>91.21</u>
FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
<u>J. Tung</u>		WO A 95/03430	02/02/95	WIPO	<u>C12Q</u>	<u>1/68</u>
		WO A 95/08000 w/Abstract	03/23/95	WIPO	"	"
		WO A 95/11995	05/04/95	WIPO	"	"
		WO A 96/19729 w/Abstract	06/27/96	WIPO	<u>G01N</u>	<u>33/53</u>
<u>J. Tung</u>		WO A 94/29723 w/Abstract	12/22/94	WIPO	"	<u>33/547</u>
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)						
<u>J. Tung</u>		RUFFNER, D.E. et al., "Thiophosphate interference experiments locate phosphates important for the hammerhead RNA self-cleavage reaction," Nucleic Acids Res., Vol. 18, No. 20, pp. 6025-6029, 1990.				
		ALMER, H. et al., "Nonenzymatic Hydrolysis of an RNA-dimer Containing a Thiophosphate Linkage," Nucleosides & Nucleotides, Vol. 10, pp. 653-655, 1991.				
		MAG, M. et al., "Synthesis and selective cleavage of an oligodeoxynucleotide containing a bridged internucleotide 5'-phosphorothioate linkage," Nucleic Acids Res., Vol. 19, No. 7, pp. 1437-1441, 1991.				
		VYLE, J.S. et al, "Sequence- and Strand-Specific Cleavage in Oligodeoxyribonucleotides and DNA Containing 3'-Thiothymidine," Biochemistry, Vol. 31, pp. 3012-3018, 1992.				
		PODYMINOGIN, M.A. et al., "Synthetic RNA-cleaving molecules mimicking ribonuclease A active center. Design and cleavage of tRNA transcripts," Nucleic Acids Res., Vol. 21, No. 25, pp. 5950-5956, 1993.				
<u>J. Tung</u>		KUIMELIS, R.G. et al., "Cleavage properties of an oligonucleotide containing a bridged internucleotide 5'-phosphorothioate RNA linkage," Nucleic Acids Res., Vol. 23, No. 23, pp. 4753-4760, 1995.				
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J. Tunc		5,989,904	11/23/99	DAS et al.	435	320.1
J. Tunc		5,407,797	04/18/95	MARLIERE et al.	u	6
FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
J. Tunc		WO A 90/14439	11/29/90	WIPO	C12Q	1/64
		WO A 98/11104 w/Abstract	03/19/98	WIPO	C07D	402/04
		WO A 96/28460 w/Abstract	09/19/96	WIPO	C07H	21/00
		WO A 95/03142 w/Abstract	02/02/95	WIPO	B09B	1/00
J. Tunc		WO A 98/05766 w/Abstract	02/12/98	WIPO	C12N	15/00
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)						
J. Tunc		WRZESINSKI, J. et al., "Specific RNA cleavages induced by manganese ions," FEBS Letters, Vol. 374, pp. 62-68, 1995.				
		MOSS, R.A. et al., "Remarkable acceleration of dimethyl phosphate hydrolysis by ceric cations," Chem. Commun., pp. 1871-1872, 1998.				
		ROELFES, G. et al., "Efficient DNA Cleavage with an Iron Complex without Added Reductant," J. Am. Chem. Soc., Vol. 122, pp. 11517-11518, 2000.				
		HODGES, R.R. et al., "Post-Assay' Covalent Labeling of Phosphorothioate-Containing Nucleic Acids with Multiple Fluorescent Markers," Biochemistry, Vol. 28, pp. 261-267, 1989.				
J. Tunc		FIDANZA, J.A. et al., "Introduction of Reporter Groups at Specific Sites in DNA Containing Phosphorothioate Diesters," J. Am. Chem. Soc., Vol. 111, pp. 9117-9119, 1989.				
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<u>J. T.</u>		DE A 3 910 151 w/Abstract	10/04/90	GERMANY	<u>C12P 19/34</u>
<u>J. T.</u>		FR 2 781 500 w/Abstract	01/28/00	FRANCE	<u>C12N 1/06</u>
<u>J. T.</u>		FR 2 768 743 w/Abstract	03/26/99	FRANCE	" "
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)					
<u>J. T.</u>		FIDANZA, J.A. et al., "Site-Specific Labeling of DNA Sequences Containing Phosphorothioate Diesters," J. Am. Chem. Soc., Vol. 114, pp. 5509-5517, 1992.			
		VLASSOV, V.V. et al., "Cleavage of tRNA with imidazole and spermine imidazole constructs: a new approach for probing RNA structure," Nucleic Acids Res., Vol. 23, No. 16, pp. 3161-3167, 1995.			
		RAMSAY, G., "DNA chips: State-of-the-art," Nature Biotechnol., Vol. 16, pp. 40-44, 1998.			
		GINOT, F., "Oligonucleotide Micro-Arrays for Identification of Unknown Mutations: How Far from Reality?" Human Mutation, Vol. 10, pp. 1-10, 1997.			
		CHENG, J. et al., "Microchip-based Devices for Molecular Diagnosis of Genetic Diseases," Molec. Diagnosis, Vol. 1, No. 3, pp. 183-200, 1996.			
<u>J. T.</u>		LIVACHE, T. et al., "Preparation of a DNA matrix via an electrochemically directed copolymerization of pyrrole and oligonucleotides bearing a pyrrole group," Nucleic Acids Res., Vol. 22, No. 15, pp. 2915-2921, 1994.			
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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS
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丁丁		CHENG, J. et al., "Preparation and hybridization analysis of DNA/RNA from <i>E. coli</i> on microfabricated bioelectronic chips," <i>Nature Biotechnol.</i> , Vol. 16, pp. 541-546, 1998.			
		TRAWICK, B.N. et al., "Inorganic Mimics of Ribonucleases and Ribozymes: From Random Cleavage to Sequence-Specific Chemistry to Catalytic Antisense Drugs," <i>Chem. Rev.</i> , Vol. 98, pp. 939-960, 1998.			
		OIVANEN, M. et al., "Kinetics and Mechanisms for the Cleavage and Isomerization of the Phosphodiester Bonds of RNA by Bronsted Acids and Bases," <i>Chem. Rev.</i> , Vol. 98, pp. 961-990, 1998.			
		LONGO, M.C. et al., "Use of uracil DNA glycosylase to control carry-over contamination in polymerase chain reactions," <i>Gene</i> , Vol. 93, pp. 125-128, 1990.			
		WALKER, G.T. et al., "Isothermal <i>in vitro</i> amplification of DNA by a restriction enzyme/DNA polymerase system," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 89, pp. 392-396, 1992.			
		BIBILLO, A. et al., "The non-enzymatic hydrolysis of oligoribonucleotides VI. The role of biogenic polyamines," <i>Nucleic Acids Res.</i> , Vol. 27, No. 19, pp. 3931-3937, 1999.			
		SENTAGNE, C. et al., "DNA cleavage photoinduced by new water-soluble zinc porphyrins linked to 9-methoxyellipticine," <i>J. Photochem. Photobiol. B</i> , Vol. 16, pp. 47-59, 1992.			
		NADJI, S. et al., "Photochemically and Photoenzymatically Cleavable DNA," <i>J. Am. Chem. Soc.</i> , Vol. 114, pp. 9266-9269, 1992.			
		POVSIC, T.J. et al., "Sequence-Specific Alkylation of Double-Helical DNA by Oligonucleotide-Directed Triple-Helix Formation," <i>J. Am. Chem. Soc.</i> , Vol. 112, pp. 9428-9430, 1990.			
丁丁		KOZAL, M.J., "Extensive polymorphisms observed in HIV-1 clade B protease gene using high-density oligonucleotide arrays," <i>Nature Med.</i> , Vol. 2, No. 7, pp. 753-759, 1996.			
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